

ULTRASOUND ENERGY DRIVEN INTRAVENTRICULAR CATHETER TO TREAT ISCHEMIA

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ABSTRACT

A method and apparatus for improving blood flow to an ischemic region (e.g., myocardial ischemia) a patient is provided. An ultrasonic transducer is positioned proximate to the ischemic region. Ultrasonic energy is applied at a frequency at or above 1 MHz to create one or more thermal lesions in the ischemic region of the myocardium. The thermal lesions can have a gradient of sizes. The ultrasound transducer can have a curved shape so that ultrasound energy emitted by the transducer converges to a site within the myocardium, to create a thermal lesion without injuring the epicardium or endocardium.